

New Claims

12. An arrangement according to one of claims 1 to 10, wherein the illumination-side tube lens is moved in axial direction in addition.

13. An arrangement according to claims 11 – 12 with motor-actuated movement.

14. An arrangement according to claim 11 with motor-actuated movement corresponding to Figures 7a, 7b.

15. An arrangement according to claim 11 with motor-actuated movement of an optical wedge corresponding to Figure 9.

16. An arrangement according to claims 1 to 15 in combination with the measurement of the light intensity by a light-sensitive detector.

17. An arrangement according to claim 16 in combination with the measurement of the light intensity by a light-sensitive detector, wherein a photodiode is used as light-sensitive detector.

18. An arrangement according to claims 16, 17, wherein the digitized signal of the light-sensitive detector is used for scaling the image brightness.

19. An arrangement according to claim 18, wherein the digitized signal of the light-sensitive detector is used for scaling the image brightness using Equation 17.

20. An arrangement according to one of claims 1 to 19, wherein the calculation of depth-discriminated images is obtained by solving the system of equations given by Equations 20, 21 and 22.

21. Arrangement according to one of the preceding claims, wherein a controllable shutter is provided for controlling the exposure time.

22. Arrangement according to one of the preceding claims, wherein artifacts are minimized through the use of averaging according to Equation 24.

23. Arrangement according to one of the preceding claims, wherein the periodic structure is provided in an insertable module.

24. Arrangement according to one of the preceding claims, wherein the periodic structure is exchangeable.

25. Arrangement according to one of the preceding claims, wherein a coding of the periodic structure with bar code is provided for automatic detection.

26. Arrangement according to one of the preceding claims, characterized by its use in microscopy.

27. Arrangement according to claims 27, characterized by its use in incident light microscopy.

28. Arrangement according to claims 27, characterized by its use in incident brightfield microscopy.

29. Arrangement according to claims 27, characterized by its use in transmitted light microscopy.

30. Arrangement according to claims 27, characterized by its use in incident fluorescence microscopy.